

### REMARKS

Claims 1, 4-12, 15-38, and 40-109 are presented for reconsideration.

#### **Oath/Declaration**

The Office indicated that the declaration is defective for using an invalid clause. Applicants enclose herewith a Supplemental Declaration to address the alleged defect.

#### **Claim Rejections**

The Office rejected claims 1, 4-12, 15-38, and 40-109 under 35 U.S.C. § 251 as being broadened in a reissue application filed outside the two year statutory period. In particular, the Office indicated that the “removal of the ‘means within the waveguide region for generating an optical mode of photons’ from new independent claims 38, 41, 42, 44, 46, 47, 48, 49, 53, and 55 constitutes and improper broadening.” Office action, page 2.

Applicants traverse. The new independent claims each require “a quantum well region within the waveguide for generating an optical mode of photons.” Support for this element can be found, for example, in the abstract of applicants’ specification, which states “[w]ithin the waveguide region is means, such as at least one quantum well region, for generating an optical mode of photons.” U.S. Patent No. 5,818,860, Abstract. Accordingly, the function referred to by the Office as having been removed from the new claims is performed by the “quantum well region.” Under 35 U.S.C. § 112, paragraph 6, the removed clause covers the structure disclosed in the application as performing the recited function, and equivalent structures. As the added “quantum well region” element is a structure disclosed in the application as performing the recited function, it is no broader than the removed means element. Thus, in this respect, the new independent claims are not broader than the original claims.

Accordingly, claims 1, 4-12, 15-38, and 40-109 have not been broadened and the rejection of these claims under 35 U.S.C. § 251 should be withdrawn.

Applicant : Garbuzov et al.  
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The fee of \$130.00 for the Petition for One Month Extension of Time to and including October 15, 2009 is being paid concurrently with the Electronic Filing System (EFS). Please apply all charges or credits to deposit account 06-1050, referencing Attorney Docket No. 14564-0006002.

Respectfully submitted,

September 30, 2009  
Date: \_\_\_\_\_

/ Chris Bowley /

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